

Hazardous materials found at mine sites

After 10 years, EPA hasn't evaluated risks

By GREG MARTIN

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When inspectors for the U.S. Environmental Protection Agency visited Mobil Oil's soon-to-be-closed Fort Meade phosphate mine in December 1990, they found cause for concern.

In a report, the inspectors concluded the mine posed a significant potential for contaminating both the aquifer and the Peace River with hazardous materials.

They cited the presence of the chemicals used in a process to separate phosphate gravel from sand and clay; including fatty acid, fuel oil, kerosene, methyl ethyl ketone, sulfuric acid, ammonia and lead.

They cited a 1982 report by Mobil that cadmium, lead, fluoride and chlorine bacterial exceeded maximum contaminant loads in some surface waters.

They wrote that such contaminants are likely to have become embedded in the sediment of the ditches used to slurry the ore around the site.

They even said: "a potential exists for a fire/explosive event due to the drums of stored oil and grease on site."

The scientists, from the NUS Corp. of Atlanta, Ga., recommended a full-blown "phase II" evaluation on a "high-priority basis." That evaluation would have entailed extensive sampling of the soil and waters at the site.

It would have determined whether the Mobil Fort Meade Mine should be put on the EPA's Superfund cleanup list.

But the evaluation was never conducted.

The Mobil Fort Meade Mine is one of 21 phosphate mining sites that were evaluated in the early 1990s and left in limbo with recommendations for further evaluations that were never done.

The EPA records, obtained recently through a Freedom of Information Act request by the *Sun*, do



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not indicate if the Mobil site, or any of the others, were ever cleaned up.

But, if the contaminants cited in the report on the Fort Meade Mine remained on the site, then that contamination also likely got washed into the river 12 years later, when a spill occurred years after the mine had been closed.

On July 6, 2002, an unusually heavy rain flooded the 15,700-acre mine area. An old dike that had impounded the stormwater washed out.

That sent 500 million gallons of mud-and-clay saturated water surging into a wetland. It then drained into the Peace River, turning the naturally tea-colored river a pale coffee-and-cream color.

The Superfund program calls for assessments of industrial sites to determine if they pose a significant hazard to people and the environment. If they do, property owners are to be held liable where possible, and federal funds are to be tapped for cleanups if not.

Without final evaluations, none of the phosphate sites will get placed on the Superfund list. Meanwhile, they remain on the program's list of sites that warrant evaluations.

The other phosphate sites on the list include Central Phosphates Inc., located a few miles south of Zephyrhills. Inspectors in 1988 were still able to detect contaminants and radioactivity that exceeded primary water quality standards -- 20 years after a 1968 washout of a cooling pond soaked a 15-acre area with acidic "process water."

The former Farmland Industries Green Bay chemical plant, now owned by Cargill, is on the list. Inspectors found the surficial aquifer outside the plant to contain "numerous contaminants at very elevated levels."

The only site on the list known to have received Superfund money is the Mulberry Phosphates Piney Point plant. The EPA authorized up to \$200,000 be spent in February 2002.

The money paid utility bills to keep the plant operating after Mulberry filed for bankruptcy and abandoned the site. That averted a catastrophic washout of holding ponds that contained 1.2 billion gallons of contaminated acid water.

After the emergency bailout, the state of Florida took over. The state expects to pay \$160 million before Mulberry's facilities are properly closed.

The information gathered by the *Sun* also shows several of the sites have a history of spills or seepage that left contaminants that can reach as far as 1,500 feet from plant boundaries and extend more than 200 feet down into the Florida Aquifer.

The reports also show that phosphate mining sites fit a pattern.

For example:

- * Clay settling areas, which are impoundments for waste clay that cover about 40 percent of each mine site, contain radionuclides at low levels and elevated concentrations of such materials as chromium, cadmium, lead, arsenic and fluoride.

- * Beneficiation plants, where phosphate is separated from sand and clay, can be expected to be contaminated with fatty acid, kerosene, No. 2 diesel fuel, sulfuric acid and, in some cases, ammonia and lead.

- * At fertilizer plants, phosphogypsum waste is known to contain arsenic, cadmium, chromium, lead, sodium, fluoride, manganese, iron, zinc, nickel and mercury as well as radium and other sources of radioactivity. Often, such contaminants can be found in the soil and waters at the sites.

However, the fact that there's a pattern is the reason so little action has been taken in the past 10 years. EPA officials realize that if one phosphate site gets placed on the EPA list, more could follow.

At the former Borden Chemical Company's Tenoroc Mine near Lakeland, which was donated to the state in 1982 for a fish management area, EPA scientists in 2001 came to the conclusion the site met the criteria for placement on Superfund's National Priority List.

If that site met Superfund criteria, then so would many of the other sites, confirmed Carol Monell, chief of Superfund remedial services.

"The bottom line is, we still need to have the rest of those evaluations done," Monell said this week. "And we actually have had quite a few meetings internally about how to proceed with them. But at this point the strategy isn't out there yet."

Monell said EPA staffers have reviewed the phosphate files and determined that none of the sites are likely to pose an immediate health hazard.

"So they can still afford some time," she said.

Charlotte County Commissioner Adam Cummings, however, argued the delay amounts to a policy in which "we don't want to review this because it will meet the definition of a hazardous waste site."

"Doesn't that mean you have a problem and you're only hiding it?" he asked.

Sam Stone, an environmental operations coordinator for the Peace River Manasota Regional Water Supply Authority, expressed no surprise and only mild concern at the types of contaminants that are likely to be found at mining sites.

"Those are the chemicals and things that they use to process phosphate and run the equipment in the industrial complexes that they are," he said.

Paul Clifford, executive director of the Florida Institute of Phosphate Research, said the EPA reports don't present enough information to determine if the contamination poses a risk to health.

"In order to evaluate the risk, I need to know more," he said. "What are the pathways to people?"

"I have no data to indicate it's a public health problem," Clifford added. "But, again, I haven't seen data. If EPA has data, well, they haven't shared it."

Bill Byle, an environmental affairs manager for Charlotte County, also said the EPA reports are too sketchy for conclusions.

"The question you need to ask is whether you want to drink water coming off 200 square miles of these mines?" he said.

Denis Mader, president of Hardee Citizens Against Pollution, pointed out state and federal agencies are poised to approve another 50,000 acres in new mining.

The time to assess the contamination risk is now, he said.

"I think our public representatives at the state and federal level need to act on behalf of the population of the state and not the industry," Mader said.

The phosphate industry questions whether the sites belong on the EPA's list, according to Bruce DeLong, a regulatory affairs director for the Florida Phosphate Council. He pointed out the presence of contaminants doesn't necessarily mean human health is at risk.

The Florida DEP points out that 10 of the sites are still producing phosphate ore or fertilizer. They operate under permits that require active monitoring.

"For these sites, we do not believe there are any significant environmental or human risks based on the monitoring and inspections," said Dee Ann Miller, DEP spokeswoman.

As for the rest, the DEP expects that the EPA's Tenoroc assessment will be used as a "guide" for ongoing discussions with the EPA, Miller said.

Officials from both agencies are conducting ongoing discussions to draft a policy for all phosphate mines, according to Miller. The goal is to analyze current and future land uses and the potential risk, and then decide "the need for further action."

"We are currently awaiting the final report on Tenoroc from EPA," Miller said.